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REMARKS

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Claims 1 – 31 are presently pending. In the above-identified Office Action, the Examiner rejected Claims 2 – 9 under 35 U.S.C. § 112, second paragraph. Claims 1 – 7 and 9 – 31 were rejected under 35 U.S.C. § 102(b) as being anticipated by Turpin ('243). Claim 8 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Turpin in view of Blecha *et al.* ('618).

By this Amendment, Applicant has amended Claims 1, 10 and 31 to more clearly define the patentably distinct features thereof.

For the reasons set forth more fully below, Applicant respectfully submits that the subject application properly present claims patentable over the prior art. Reconsideration, allowance and passage to issue are respectfully requested.

As noted previously, the present invention addresses the need in the art for a more simple and less costly system or method for providing improved resolution in a target tracking and optical imaging application.

The need in the art is addressed by the system and method of the present invention. In a most general implementation, the invention provides an imaging system mounted on a mobile platform. The system is adapted to receive a beam of electromagnetic energy; continuously record a relayed image of an aperture plane of the system; and compensate the image for motion of the platform relative to an inertial reference.

The invention is set forth in Claims of varying scope of which Claim 1 is illustrative. Claim 1 recites:

1. An imaging system comprising:
first means mounted on a mobile platform for receiving a beam of electromagnetic energy;
second means for recording an image provided by said beam, said second means including means for continuously recording a relayed image of an aperture plane of said system; and
third means for compensating said image for motion of said platform relative to an external reference. (Emphasis added.)

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None of the references, taken alone or in combination, teach, disclose or suggest the invention as presently claimed. That is, none of the references teach, disclose or suggest an imaging system with means for **continuously recording a relayed image of an aperture plane of a system** as presently claimed.

In the above-identified Office Action, the Examiner relied heavily on Turpin. Turpin purports to teach image synthesis using time sequential holography. The Examiner suggests that Turpin teaches the invention as previously claimed. However, Turpin clearly does not teach or suggest a means for **continuously recording a relayed image of an aperture plane of a system** as presently claimed.

Blecha purports to teach Second Generation FLIR Common Modules. However, Blecha does not overcome the shortcomings of Turpin. That is, Blecha, even when combined with Turpin, does not teach or suggest a means for **continuously recording a relayed image of an aperture plane of a system** as presently claimed.

Accordingly, Claims 1 – 28 and 31 should be allowable.

As to Claim 30 and 32 – 36, Applicant notes that Turpin does not teach or suggest an imaging system as claimed with means for recording an interference pattern or holographic image. The passage in Turpin quoted by the Examiner at col. 21, lines 45 – 57 as teaching the recording of an interference pattern provides no such teaching. The passage in question appears to teach a recording of **amplitudes**. The passage in question reads as follows:

“Instead of producing point sources in the frequency plane P1 that interfere in the image plane P3, in multi-frequency TSH the process is halted at the frequency plane P1, where a storage medium records the amplitudes of the point sources. Once all point source amplitudes are recorded, a separate processor, not necessarily a lens at the lens plane P2, performs the Fourier transform to produce an image in the image plane P3. Multi-frequency TSH avoids the integration of bias terms (Equation (37)) in the image, potentially permitting relatively higher dynamic range images than obtainable with most other embodiments.” (Emphasis added.)

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Accordingly, Claims 1 - 28 and 30 - 36 should be allowable.

Reconsideration, allowance and passage to issue are respectfully requested.

Respectfully submitted,
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